

Environmental  
Restoration  
Contractor

**ERC Team**

**Interoffice Memorandum**



037172  
0052015

Job No. 22192

Written Response Required? NO

Closes CCN: N/A

OU: 200-UP-1

TSD: N/A

ERA: N/A

Subject Code: 8630

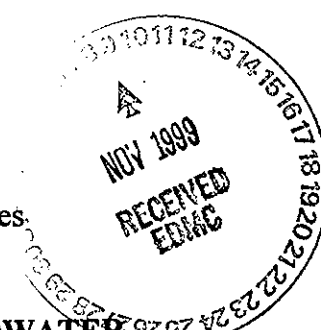
TO: C. D. Wittreich, H9-12

DATE: October 7, 1996

J. A. Lerch, B1-35

COPIES: See Below

FROM: Duane Jacques  
Analytical Services/Field Services  
H9-10/372-9400



SUBJECT: **200-UP-1 IRM IMPLEMENTATION SAMPLING, MONTHLY GROUNDWATER RESULTS, AUGUST 1996, REV 0**

46831

REFERENCES:

1. BHI, 1996, *On-Site Measurements Quality Assurance Plan*, BHI-00852, REV 0, Bechtel Hanford, Inc., Richland, Washington.
2. BHI, 1995, *Field Screening Procedures*, BHI-EE-05, Bechtel Hanford, Inc., Richland, Washington.
3. BHI, 1995a, *200-UP-1 Field Screening Support Logbook*, EL-1277, Bechtel Hanford, Inc., Richland, Washington.

This data package contains field screening results for groundwater samples analyzed to support the 200-UP-1 IRM Implementation Sampling program. The Quality Assurance level for this work corresponds to QA-1 as specified in the reference 1 (BHI 1996). The samples were managed under SAF B96-153.

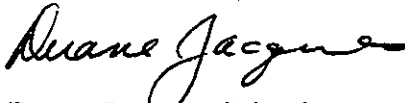
Attachment 1 contains Volatile Organic Compound (VOC), total uranium, and technetium-99 results for groundwater samples collected to support the referenced project. The VOC results were generated using a Hewlett Packard 5890 gas chromatograph with a headspace autosampler operated in accordance with Field Screening Procedure (FSP) 1.1, *Aqueous Headspace Analysis of Volatile Organic Compounds in Water* (BHI 1995). Information concerning calibration and operation of the gas chromatograph is contained in the instrument logbook EL-1329.

The total uranium results were generated using a ChemChek KPA-11a Kinetic Phosphorescence Analyzer operated in accordance with FSP 1.22, *Kinetic Phosphorescence Analysis of Total Uranium in Water* (BHI 1995). Information concerning calibration and operation of the ChemChek KPA-11a is contained in the 200-UP-1 field logbook EL-1277.

C. D. Wittreich, H9-12  
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The technetium-99 analyses were conducted at the 222-S Laboratory. The results are included in this data package for information only. Questions concerning the analyses and results should be directed to the laboratory.

Please contact me if you have any questions on this information.



Duane Jacques, Scientist

IDJ:idj

**Attachments:**

- Attachment 1. 200-UP-1 IRM Implementation Sampling, Monthly Groundwater Results, August 1996
- Attachment 2. Sample Chain of Custody Sheets

**Copies:**

- R. T. Coffman, H9-11, w/attachment 1 only
- C. W. Denslow, H9-02, w/attachment 1 only
- A. Hopkins, H9-11, w/attachment 1 only
- T. D. LeFrancois, H9-03, w/attachment 1 only
- D. A. Myers, H9-11, w/attachment 1 only
- R. O. Mahood, H9-11, w/attachment 1 only
- BHI Document Control, H4-79, w/original attachments

**200-UP-1 IRM Implementation Sampling**  
**Monthly Groundwater Results, August 1996**  
**SAF B96-153**

Sample Location	HEIS Number	Sample Date	Analysis Date (VOA)	Chloroform (µg/L)	Carbon TetraCl (µg/L)	TCE (µg/L)	Uranium (µg/L)	Technetium-99 (pCi/L)
299-W19-18	BOJ091	8/29/96	NA	NA	NA	NA	NA	124
299-W19-18	BOJ092	8/29/96	9/3/96	4.6	270	<2.0	715	NA
299-W19-20	BOJ094	8/30/96	NA	NA	NA	NA	NA	7850
299-W19-20	BOJ095	8/30/96	9/3/96	6.8	210	9.9	1560	NA
299-W19-23	BOJ097	8/30/96	NA	NA	NA	NA	NA	25600
299-W19-23	BOJ098	8/30/96	9/3/96	6.2	170	3.4	853	NA
299-W19-24	BOJ0B0	8/30/96	NA	NA	NA	NA	NA	12800
299-W19-24	BOJ0B1	8/30/96	9/3/96	5.2	120	4.0	2950	NA
299-W19-28	BOJ0B3	8/28/96	NA	NA	NA	NA	NA	2740
299-W19-28	BOJ0B4	8/28/96	9/3/96	<2.0	2.4	<2.0	410	NA
299-W19-29	BOJ0B6	8/28/96	NA	NA	NA	NA	NA	128
299-W19-29	BOJ0B7	8/28/96	9/3/96	2.1	<2.0	<2.0	31.6	NA
299-W19-30	BOJ0B9	8/28/96	NA	NA	NA	NA	NA	4500
299-W19-30	BOJ0C0	8/28/96	9/3/96	2.8	17	<2.0	748	NA
Field Blank @ 299-W19-30	BOJ0D7	8/28/96	NA	NA	NA	NA	NA	<104
Field Blank @ 299-W19-30	BOJ0D8	8/28/96	9/3/96	<2.0	<2.0	<2.0	<1.0	NA
299-W19-34A	BOJ0C2	8/29/96	NA	NA	NA	NA	NA	235
299-W19-34A	BOJ0C3	8/29/96	9/3/96	8.1	57	4.5	1.60	NA
299-W19-35	BOJ0C5	8/30/96	NA	NA	NA	NA	NA	609
299-W19-35	BOJ0C6	8/30/96	9/3/96	4.0	140	12	42.2	NA
299-W19-37	BOJ0C8	9/13/96	NA	NA	NA	NA	NA	3850
299-W19-37	BOJ0C9	9/13/96	9/23/96	<2.0	30	<2.0	1820	NA
299-W19-38	BOJ0D1	9/4/96	NA	NA	NA	NA	NA	910
299-W19-38	BOJ0D2	9/4/96	9/10/96	8.2	105	3.0	183	NA
299-W19-40	BOJ0D4	9/4/96	NA	NA	NA	NA	NA	559
299-W19-40	BOJ0D5	9/4/96	9/10/96	8.0	33	<2.0	146	NA
Trip Blank	BOJ0D9	8/30/96	9/3/96	<2.0	<2.0	<2.0	NA	NA
Trip Blank	BOJ0F0	8/28/96	9/3/96	<2.0	<2.0	<2.0	NA	NA
Trip Blank	BOJ0F1	8/31/96	9/3/96	<2.0	<2.0	<2.0	NA	NA
Trip Blank	BOJ0F5	9/4/96	9/10/96	<2.0	<2.0	<2.0	NA	NA
Trip Blank	BOJ0F7	9/13/96	9/23/96	<2.0	<2.0	<2.0	NA	NA

NA - Not Analyzed

j - Value less than practical quantitation limit

Analyst:

*I. D. Jacques*  
 I. D. Jacques

VOA Instrument: Hewlett Packard 5890 GC, Serial # 3235A47685

Method: Dual DB-VRX columns, ECD/FID, 1mL headspace injection

Logbook: 200-UP-1 Field Logbook, EL-1277, pg 138

Uranium Instrument: ChemChek KPA-11a, Serial # 9445050065

Method: Kinetic Phosphorescence

Logbook: 200-UP-1 Field Logbook, EL-1277, pgs 141 to 143

<b>Bechtel Hanford Inc.</b>		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>						B96-153-49		Page 1 of 1			
Collector <i>K. Trapp / A. B. 10</i>				Company Contact C. D. Wittreich				Telephone No. (509) 372-9315		Data Turnaround 45 Days			
Project Designation 200-UP-1 Limited Field Investigation				Sampling Location 200 W				SAF No. B96-153					
Ice Chest No.				Field Logbook No. <i>ELC-1135</i>				Method of Shipment Hand Delivered					
Shipped To Mobile Laboratory				Offsite Property No. NA				Bill of Lading/Air Bill No. NA					
POSSIBLE SAMPLE HAZARDS/REMARKS				Preservation		None	HCl to pH <2						
				Type of Container		P	Gs*						
				No. of Container(s)		1	1						
Special Handling and/or Storage Maintain samples between 2 degrees C and 6 degrees C.				Volume		20ml	40ml						
SAMPLE ANALYSIS						URANIUM TOTAL	See item (1) in Special Instructions.						
Sample No.	Matrix *	Sample Date	Sample Time										
B0J0C0	Water	8/28/96	1020	X	X								
B0J0B4 ✓	W	8/28/96	1128	X	X								
<del>B0J0B5</del> <i>8/28/96</i>													
B0J0D8	W	8/28/96	0950	X	X								
B0J0F0	W	8/28/96	0750		X								
B0J0B7	W	8/27/96	1244	X	X								
CHAIN OF POSSESSION		Sign/Print Names				<b>SPECIAL INSTRUCTIONS</b> (1) VOA BY FIELD GC -- Chlorinated Hydrocarbon (Carbon tetrachloride)						<b>Matrix *</b> S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other	
Relinquished By <i>K. Trapp / K. Trapp</i>		Date/Time <i>0735</i>		Received By <i>ERC</i>		Date/Time <i>0735</i>							
Relinquished By <i>ERC</i>		Date/Time <i>0910</i>		Received By <i>D. Jaeger</i>		Date/Time <i>0910</i>							
Relinquished By <i>Fuller</i>		Date/Time <i>9-3-96</i>		Received By <i>Duane Jaeger</i>		Date/Time <i>9-3-96</i>							
Relinquished By		Date/Time		Received By		Date/Time							
Relinquished By		Date/Time		Received By		Date/Time							
LABORATORY SECTION		Received By				Title				Date/Time			
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By				Date/Time			

<b>Bechtel Hanford Inc.</b>		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>						<b>B96-153-43</b>		Page 1 of 1		
<b>Collector</b> K. T. 1999				<b>Company Contact</b> C. D. Wittreich				<b>Telephone No.</b> (509) 372-9315		<b>Data Turnaround</b> 45 Days		
<b>Project Designation</b> 200-UP-1 Limited Field Investigation				<b>Sampling Location</b> 200 W				<b>SAF No.</b> B96-153				
<b>Ice Chest No.</b>				<b>Field Logbook No.</b> FFL-1135				<b>Method of Shipment</b> Hand Delivered				
<b>Shipped To</b> Mobile Laboratory				<b>Offsite Property No.</b> NA				<b>Bill of Lading/Air Bill No.</b> NA				
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b>				<b>Preservation</b>		None	HCl to pH <2					
				<b>Type of Container</b>		P	Gs*					
				<b>No. of Container(s)</b>		1	1					
<b>Special Handling and/or Storage</b> Maintain samples between 2 degrees C and 6 degrees C.				<b>Volume</b>		20ml	40ml					
<b>SAMPLE ANALYSIS</b>						URANIUM TOTAL	See item (1) in Special Instructions.					
<b>Sample No.</b>		<b>Matrix *</b>	<b>Sample Date</b>	<b>Sample Time</b>								
BOJ092		Water	8/27/96	1055	X	X						
BOJ0C3		W	8/29/96	1255	X	X						
BOJ0F1		W	8/29/96	0740		X						
<b>CHAIN OF POSSESSION</b>		<b>Sign/Print Names</b>				<b>SPECIAL INSTRUCTIONS</b> (1) VOA BY FIELD GC - Chlorinated Hydrocarbon (Carbon tetrachloride)						<b>Matrix *</b> S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids T - Tissue WI - Wipe L - Liquid V - Vegetation X - Other
Relinquished By		Date/Time		Received By		Date/Time						
K. T. 1999		8/30/96		C. D. Wittreich		8-30-96						
Relinquished By		Date/Time		Received By		Date/Time						
C. D. Wittreich		8-30-96		D. J. Jacobs		8/30/96						
Relinquished By		Date/Time		Received By		Date/Time						
Relinquished By		Date/Time		Received By		Date/Time						
<b>LABORATORY SECTION</b>		Received By				Title				Date/Time		
<b>FINAL SAMPLE DISPOSITION</b>		Disposal Method				Disposed By				Date/Time		

<b>Bechtel Hanford Inc.</b>		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>						<b>B96-153-51</b>		Page 1 of 1.	
Collector <i>K. Trapp</i>			Company Contact C. D. Wittreich				Telephone No. (509) 372-9315		Data Turnaround 45 Days		
Project Designation 200-UP-1 Limited Field Investigation			Sampling Location 200 W				SAF No. B96-153				
Ice Chest No.			Field Logbook No. <i>EF1-1137</i>				Method of Shipment Hand Delivered				
Shipped To Mobile Laboratory			Offsite Property No. NA				Bill of Lading/Air Bill No. NA				
POSSIBLE SAMPLE HAZARDS/REMARKS			Preservation		None	HCl to pH <2					
			Type of Container		P	Gs*					
			No. of Container(s)		1	1					
Special Handling and/or Storage Maintain samples between 2 degrees C and 6 degrees C.			Volume		20ml	40ml					
SAMPLE ANALYSIS					URANIUM TOTAL	See item (1) in Special Instructions.					
Sample No.		Matrix *	Sample Date	Sample Time							
BOJ0C6		Water	<i>8/30/96</i>	<i>0912</i>	<i>X</i>	<i>X</i>					
<i>BOJ095</i>		<i>W</i>		<i>1008</i>	<i>X</i>	<i>X</i>					
<i>BOJ0B1</i>		<i>W</i>		<i>1105</i>	<i>X</i>	<i>X</i>					
<i>BOJ098</i>		<i>W</i>	<i>8/30/96</i>	<i>1245</i>	<i>X</i>	<i>X</i>					
<i>BOJ0D9</i>		<i>W</i>	<i>8/30/96</i>	<i>0730</i>		<i>X</i>					
CHAIN OF POSSESSION		Sign/Print Names				<b>SPECIAL INSTRUCTIONS:</b> (1) VOA BY FIELD GC -- Chlorinated Hydrocarbon (Carbon tetrachloride)					
Relinquished By <i>K. Trapp / K. Trapp</i>		Date/Time <i>9/3/96</i>	Received By <i>D. Jacobs</i>		Date/Time <i>0900</i>		<b>Matrix *</b> S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other				
Relinquished By		Date/Time	Received By		Date/Time						
Relinquished By		Date/Time	Received By		Date/Time						
Relinquished By		Date/Time	Received By		Date/Time						
Relinquished By		Date/Time	Received By		Date/Time						
LABORATORY SECTION		Received By				Title				Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By				Date/Time	

<b>Bechtel Hanford Inc.</b>		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>						<b>B96-153-53</b>		Page 1 of 1.			
Collector <i>A. Lizzo</i>				Company Contact C. D. Wittreich				Telephone No. (509) 372-9315		Data Turnaround 45 Days			
Project Designation 200-UP-1 Limited Field Investigation				Sampling Location 200 W				SAF No. B96-153					
Ice Chest No.				Field Logbook No. <i>EFL-1135</i>				Method of Shipment Hand Delivered					
Shipped To Mobile Laboratory				Offsite Property No. NA				Bill of Lading/Air Bill No. NA					
POSSIBLE SAMPLE HAZARDS/REMARKS				Preservation		None	HCl to pH <2						
				Type of Container		P	Gs*						
				No. of Container(s)		1	1						
Special Handling and/or Storage Maintain samples between 2 degrees C and 6 degrees C.				Volume		20ml	40ml						
SAMPLE ANALYSIS						URANIUM TOTAL	See item (1) in Special Instructions.						
Sample No.	Matrix *	Sample Date	Sample Time										
BOJ0D2	Water	9.4.96	1118	X	X								
<i>B0J0F5</i>	<i>W</i>	<i>9.4.96</i>	<i>0750</i>		X								
<i>B0J0D5</i>	<i>W</i>	<i>9.4.96</i>	<i>1220</i>	X	X								
CHAIN OF POSSESSION		Sign/Print Names				<b>SPECIAL INSTRUCTIONS</b> (1) VOA BY FIELD GC - Chlorinated Hydrocarbon (Carbon tetrachloride)							
Relinquished By <i>A. Lizzo</i>		Date/Time <i>1400</i>		Received By <i>C. D. Wittreich</i>								Date/Time <i>1400</i>	
<i>A. Lizzo</i> (ERC)		<i>9-4-96</i>		<i>C. D. Wittreich</i>								<i>9-4-96</i>	
Relinquished By <i>C. D. Wittreich</i>		Date/Time <i>0915</i>		Received By <i>D. Secundo</i>								Date/Time <i>0915</i>	
<i>C. D. Wittreich</i>		<i>9-10-96</i>		<i>D. Secundo</i>								<i>9-10-96</i>	
Relinquished By		Date/Time		Received By		Date/Time		<b>Matrix *</b> S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids T - Tissue WI - Wipe L - Liquid V - Vegetation X - Other					
Relinquished By		Date/Time		Received By		Date/Time							
Relinquished By		Date/Time		Received By		Date/Time							
LABORATORY SECTION		Received By				Title							
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By							
						Date/Time							

<b>Bechtel Hanford Inc.</b>		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>						<b>B96-153-52</b>		Page 1 of 1			
Collector <i>A. Rizzo</i>				Company Contact C. D. Wittreich				Telephone No. (509) 372-9315		Data Turnaround Field			
Project Designation 200-UP-1 Limited Field Investigation				Sampling Location 200 W				SAF No. B96-153					
Ice Chest No.				Field Logbook No. <i>EFL-1123-2</i>				Method of Shipment Hand Delivered					
Shipped To Mobile Laboratory				Offsite Property No. NA				Bill of Lading/Air Bill No. NA					
POSSIBLE SAMPLE HAZARDS/REMARKS				Preservation		None	HCl to pH <2						
				Type of Container		P	Gs*						
				No. of Container(s)		1	1						
Special Handling and/or Storage Maintain samples between 2 degrees C and 6 degrees C.				Volume		20ml	40ml						
SAMPLE ANALYSIS						URANIUM TOTAL	See item (1) in Special Instructions.						
Sample No.		Matrix *		Sample Date		Sample Time							
B0J0C9		Water		9-13-96		0936		X	X				
<i>B050F7</i>		<i>W</i>		<i>9-13-96</i>		<i>0740</i>			X				
CHAIN OF POSSESSION		Sign/Print Names						<b>SPECIAL INSTRUCTIONS</b>  (1) VOA BY FIELD GC - Chlorinated Hydrocarbon (Carbon tetrachloride)					
Relinquished By <i>A. Rizzo</i>		Date/Time <i>9-13-96 1350</i>		Received By <i>B. Jaeger</i>		Date/Time <i>9-13-96 1350</i>		<div style="float: right;"> <b>Matrix *</b>            S = Soil            SE = Sediment            SO = Solid            SL = Sludge            W = Water            O = Oil            A = Air            DS = Drum Solids            DL = Drum Liquids            T = Tissue            WI = Wipe            L = Liquid            V = Vegetation            X = Other         </div>					
Relinquished By		Date/Time		Received By		Date/Time							
Relinquished By		Date/Time		Received By		Date/Time							
Relinquished By		Date/Time		Received By		Date/Time							
LABORATORY SECTION		Received By						Title				Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method						Disposed By				Date/Time	